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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/252,485	02/18/1999	JOHN S. HENDRICKS	5615	4559

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EXAMINER

LONSBERRY, HUNTER B

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/252,485

Applicant(s)

HENDRICKS ET AL.

Examiner

Hunter B. Lonsberry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42, 43, 46-54, 57, 60-64, 74 and 77-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-43, 46-54, 57, 60-64, 74 and 77-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/24/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/21/03 have been fully considered but they are not persuasive.

Applicant argues that an expansion card may be designed to accommodate any hardware upgrade compatible with set stop terminal 220 (specification, page 44, lines 21-25), and that this statement is not limited to certain hardware upgrades figures or embodiments. "Therefore, the primed reference numbers in figure 14 clearly meet the condition of any hardware upgrade. Consequently, this statement is a clear teaching that the present application describes and enables an embodiment for implementing the picture on picture capability in which the hardware upgrade components shown with the primed reference numbers are located on a card insertable into an existing set top terminal." (response page 9).

Regarding applicant's argument, the examiner has reviewed pages 43-44 and 49-51 and figure 14 of applicant's specification, regarding the second signal components (603', 606', 609', 314', 318', 616', etc). It appears as though the ' marker delineates a first and second component, and in no where does it refer to ' marked components as being located on a set top upgrade card. Figure 14 does disclose the use of an expansion card interface 322, and upgrade port 662, but none of the ' marked components show any coupling through either interface 322 or port 662 (nor is there

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any discussion there of), rather they are shown as being linked through microprocessor 602.

Additionally, neither the specification, nor the drawings describe the boundary, contents or components of the upgrade hardware in relation to figure 14. Therefore, all of the ' marked components must be part of the set top device itself.

The examiner notes that the discussion on page 44, lines 21-25 is in reference to figures 5a/b having expansion card slots. There is no correlation with any of the components of figure 14, and Figures 5 a/b do not show an upgrade card of any kind, but merely an upgrade port 664.

The examiner also notes that Figures 12 a/b while directed to hardware upgrades A-E, are not directed to a video hardware upgrade which enables picture in picture presentations, rather figure 12b, is directed towards a digital audio tuner, with not mention of a video tuner, Figure 12a, is directed to computing component upgrades (page 41, lines 4-29, page 42, lines 18-22).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2 Claims 42-43, 46-54, 57, 60-64, 74 and 79 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention.

The current invention is an apparatus and method for outputting a plurality of signals or an apparatus and method for displaying a picture on a picture with upgrade capability as illustrated in figures 12a, 12b and 14.

The specification at page 3, lines 17-18 indicates that **"the set top terminal may be achieved through a set of hardware upgrades to (1) existing set top converter upgraded with a circuit card"**.

The specification at page 24, lines 3-10 and page 39, line 23 – page 43, line 21 describe hardware upgrades A-E.

The specification at page 43, line 23 – page 44, line 25 describes expansion card slots.

The specification at page 49, lines 11 – 15 describes that **"users who desire picture-on-picture capability can be provided with a set top terminal 220 having upgraded hardware components that allow two or more channels to be tuned and decompressed at any given time"**.

Figure 14 illustrates a set top terminal with an expansion card interface 322.

The specification and drawings fail to support the following claimed subject matter:

a) ***"second signal processing components comprising a second tuner, a second demodulator, a second demultiplexor, a second video/graphics text demultiplexor, a second decompressor.....wherein at least the second signal***

processing components are located on an upgrade card insertable into an existing set top terminal to provide digital picture-on-picture capability now recited in claim 42, lines 13-26;

b) **“second signal processing components, wherein the second signal processing components process a second video signal, the second signal processing components also operable to scale and redirect the video signal...wherein the second signal processing components are located on an expansion card inserted into the apparatus”** now recited in claim 79, lines 12-23.

The specification fails to describe the contents or components of the upgrade card. In other words, the disclosure does not describe or suggest that the upgrade card contains one or more of tuner 603, demod 606, demux 609, decrypt 600, decompressor 612, tuner 603', demod 606', demux 609', decrypt 600' and decompressor 612' for the apparatus as now recited in claims 2, 42, 75 and 76. The specification recites a broad statement that the set top terminal has the capability of having an upgrade card, but it fails to describe the actual contents or components of the upgrade card. Figure 14 illustrates a set top terminal with an expansion card interface 322, but it does not illustrate the contents or components of the upgrade card. The components in the hardware upgrades of figures 12a and 12b do not correspond to claims 2, 42, 75 and 76.

Further, claim 42 indicates that the second set of components (second tuner, second demod, second demux etc.) is located on an upgrade card. The specification

and drawings fail to describe the boundary, contents or components of the upgrade card as described in claim 42. For the above reasons, the Examiner posits that claim 42 limitations are new matter and they must be canceled from the claims.

Further, claim 79 indicates that the second set of components (second tuner, second demod, second demux etc.) is located on an upgrade card. The specification and drawings fail to describe the boundary, contents or components of the upgrade card as described in claim 79. For the above reasons, the Examiner posits that claim 79 limitations are new matter and they must be canceled from the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3 Claims 77-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (of record) in view of Willis (of record) and further in view Ryu (of record).

Considering claims 77 and 78, Arai discloses an apparatus for displaying a picture on a picture and corresponding method comprising:

- a) a plurality of tuners (5A, 5B) (figures 3A and 3B) for tuning;
- b) a plurality of demodulators (27, 28) or demodulating;
- c) a plurality of output ports wherein at least two of the plurality of output ports are connected to different tuners (see audio output from demod (27) to switch (10), three

video outputs from demod (27) to combiner (8), audio output from demod (28) to switch (10), three video outputs from demod (28) to combiner (8)); and
d) a microprocessor (26) connected to the plural tuners (5A, 5B) and demodulators (27,28) for coordinating signal processing.

Note that Arai is interested in processing several different television standards for simultaneous display (col. 1, lines 5-15) and he indicated that various changes or modifications could be made to his system (col. 17, lines 10-34). However, he fails to disclose **(a)** a plurality of audio and video decompressors **(b)** that at least one video signal may have more than one of the plurality of audio signals, and **(c)** that the method uses an upgrade card inserted in an existing set-top terminal as recited in the claims.

Wasilewski discloses a system for transmitting and receiving digital television signals (figures 1-14). Digital television is another type of television standard. The digital receiver (figure 14) comprises: a demodulator (250), demultiplexer (258, 268, 272), decryptors (274), decompressors (276, 280) for decompressing video, audio and text and NTSC encoders (276,280) (columns 21-24). These are typical elements in a digital receiver for processing digital signals transmitted from a central broadcasting facility. Further, note that Wasilewski's system may be used in various applications. See col. 2, line 41 - col. 3, line 14 and col. 34, lines 12-30. Wasilewski provides the advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Arai's system to include a plurality of digital receiving circuit elements such as demultiplexors, decrypters, decompressors and NTSC encoders, as taught by Wasilewski, for the typical advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

The combination of Arai and Wasilewski fails to disclose one video signal having a plurality of corresponding audio signals, or utilizing an upgrade card.

Ryu discloses an apparatus for displaying a picture on a picture and corresponding method comprising a plurality of tuners (9,10), video processing circuits (4,5) for outputting video signals, and sound circuits (8, 12, 13) for outputting more than one of plurality of audio signals (native or foreign) corresponding to at least one video signal. See the entire reference including but not limited to the abstract and col. 2, lines 20-62.

Additionally, it would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include at least one video signal to have more than one of the plurality of audio signals, as taught by Ryu, for the advantage of providing a plural picture display receiver with the ability to select a desired audio output based on a plurality of audio signals for a video signal.

Moreover, it would have been an obvious matter of design choice to utilize an upgrade card, since the modification would have involved a mere separation of functions/parts. *Nerwin V. Erlichman*, 168 USPQ 177, 179 (PTO Bd. of Int. 1969).

Furthermore, it would have been obvious as a matter of design choice to make any apparatus or method steps to be insertable into any video processing receiver such

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as a set-top box, television or VCR, since audio and video signals are commonly received by video processing equipments that are inclusive of the set-top box , television and VCR.

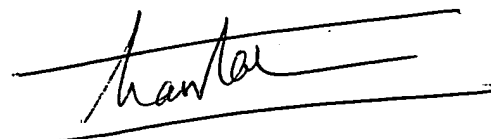
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL

A handwritten signature in black ink, appearing to read 'Hai Tran', is written over two horizontal lines.

**HAI TRAN
PRIMARY EXAMINER**